

WHAT IS CLAIMED IS:

1. An image-processing device comprising:
  - a first reading module which reads a first signal in a main scanning direction of an image of a document;
  - 5 a second reading module which reads a second signal in the main scanning direction of the image of the document;
  - a scanning module including a carriage which relatively moves the first and second reading modules and the image of the document to make the first and second modules scan the image of the document in its sub-scanning direction;
  - 10 a scanning-control-condition selecting module which selects scanning control conditions of the scanning module in accordance with a plurality of read magnifications preset as read magnifications by the first and second reading modules to the document;
  - 15 a first setting module which sets the scanning control conditions selected by the scanning-control-condition selecting module to a plurality of control conditions in accordance with the read magnification of the first reading module;
  - 20 a second setting module which sets the scanning control conditions selected by the scanning-control-condition selecting module to a plurality of control conditions in accordance with a read magnification of the second reading module; and

an operating module which computes the image data at a corresponding read magnification in accordance with the first and second signals read by the first and second reading modules at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

2. An image-processing device according to claim 1, wherein the operating module is provided with first and second operating modules which compute the image data values at a corresponding read magnification through enlargement and reduction operations in accordance with the first and second signals read by the first and second reading modules at any one of the above preset read magnifications when set to a read magnification other than the above preset read magnifications and a changing module for adaptively changing the first and second operating modules in accordance with a set read magnification.

3. An image-processing device according to claim 1, wherein the first and second setting modules set the scanning control conditions in accordance with light-receiving-sensitivity ratios of the first and second reading modules.

4. An image-processing device according to claim 1, wherein the first and second setting modules set the scanning conditions to a specific magnification and magnifications upper and lower than the specific

magnification in order to prevent vibrations caused by the carriage scan.

5           5. An image-processing device comprising:

5           a first reading module which reads a monochrome signal in a main scanning direction of an image of a document;

10          a second reading module which reads a color signal in the main scanning direction of the image of the document;

15          a correcting module which aligns color signals read by the second reading module every line;

20          a scanning module including a carriage which relatively moves the first and second reading modules and the image of the document to make first and second reading modules scan the image of the document in its sub-scanning direction;

25          a scan-control-condition selecting module which selects scan-control conditions of the scanning module in accordance with a plurality of read magnifications preset as read magnifications of the document by the first and second reading modules;

30          a setting module which sets the scanning control conditions selected by the scan-control-condition selecting module to a plurality of control conditions in accordance with the correction of color signals to be corrected by the correcting module every line; and

35          an operating module which computes the image data

of a corresponding read magnification through  
operations in accordance with the first and second  
signals read by the first and second reading modules at  
any one of the preset read magnifications when set to a  
5 read magnification other than the preset read  
magnifications.

6. An image-processing device comprising:
  - a reading module which reads color signals in a main scanning direction of an image of the document;
  - 10 a correcting module which aligns the color signals read by the reading module every line;
  - a scanning module including a carriage which relatively moves the reading module and the image of the document to make the reading module scans the image of the document in its sub-scanning direction;
  - 15 a scan-control-condition selecting module which selects scan-control conditions of the scanning module in accordance with a plurality of read magnifications preset as read magnifications of the document by the reading module;
  - 20 a setting module which sets the scanning control conditions selected by the scanning-control-condition selecting module to a plurality of control conditions in accordance with the correction of color signals to be corrected by the correcting module every line; and
  - 25 an operating module which computes the image data of a corresponding read magnification through

operations in accordance with the color signals read by the reading modules at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

- 5        7. An image-processing device comprising:
  - a reading module which reads signals in a main scanning direction of an image of a document;
  - a scanning module including a carriage which relatively moves the reading module and the image of the document to make the reading module scans the image of the document in its sub-scanning direction;
  - 10      a scanning-control-condition selecting module which selects scanning-control conditions of the scanning module in accordance with a plurality of read magnifications preset as read magnifications of the document by the reading module;
  - 15      a setting module which sets the scanning control conditions selected by the scanning-control-condition selecting module to a plurality of control conditions in accordance with read magnifications of the reading module;
  - 20      a first operating module which computes the image data at a corresponding read magnification through enlargement operation in accordance with the signal read by the reading module at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications;
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a second operating module which computes the image data at a corresponding read magnification through reduction operation in accordance with the signal read by the reading module at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications; and

5 a changing module which adaptively changes the first and second operating modules in accordance with a set read magnification.

10 8. An image-processing device according to claim 7, wherein the setting module sets the scanning-control conditions to a specific magnification and magnifications upper and lower than the specific magnification in order to prevent vibrations caused by 15 the carriage scanning.

9. An image-processing device comprising:  
first reading means for reading first signals in a main scanning direction of an image of a document;  
second reading means for reading second signals in 20 the main scanning direction of the image of the document;

scanning means including a carriage for relatively moving the first and second reading means and the image of the document to make the first and second reading 25 means scan the image in its sub-scanning direction;  
scanning-control-condition selection means for selecting scanning control conditions of the scanning

means in accordance with a plurality of read magnifications preset as read magnifications of the document by the first and second reading means;

5           first setting means for setting the scanning control conditions selected by the scanning-control-condition selection means to a plurality of control conditions in accordance with the read magnification of the first reading means;

10          second setting means for setting the scanning control conditions selected by the scanning-control-condition selection means to a plurality of control conditions in accordance with the read magnification of the second reading means; and

15          operation means for computing the image data of a corresponding read magnification in accordance with the first and second signals read by the first and second reading means at any one of the preset read magnifications.

10. An image-processing device according to  
20 claim 9, wherein the operation means is provided with first and second operation means for computing the image data at a corresponding read magnification through enlargement and reduction operations in accordance with the first and second signals read by the first and second reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications

and change means for adaptively changing the first and second operation means in accordance with a set read magnification.

11. An image-processing device according to  
5 claim 9, wherein the first and second setting means set  
the scanning control conditions in accordance with  
light-receiving sensitivities of the first and second  
reading means.

12. An image-processing device according to  
10 claim 9, wherein the first and second setting means set  
the scanning control conditions to a specific  
magnification and magnifications upper and lower than  
the specific magnification in order to prevent  
vibrations caused by the carriage scanning.

15 13. An image-processing device comprising:  
first reading means for reading monochrome signals  
in a main scanning direction of an image of a document;  
second reading means for reading color signals in  
the main scanning direction of the image of the  
20 document;

correction means for aligning color signals read  
by the second reading means every line;  
scanning means including a carriage for relatively  
moving the first and second reading means and the image  
25 of the document to make the means scan the image in its  
sub-scanning direction;

scanning-control-condition selection means for

selecting scanning control conditions of the scanning means in accordance with a plurality of read magnifications of the document preset as read magnifications by the first and second reading means;

5 setting means for setting the scanning control conditions selected by the scanning-control-condition selection means to a plurality of control conditions in accordance with the correction of color signals to be corrected by the correction means every line; and

10 operation means for computing the image data at a correspond read magnification through operations in accordance with the first and second signals read by the first and second reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

14. An image-processing device comprising:  
reading means for reading color signals in a main scanning direction of an image of a document;

20 correction means for aligning the color signals read by the reading means every line;

scanning means including a carriage for relatively moving the reading means and the image of the document to make the reading means scans the image in its sub-scanning direction;

scanning-control-condition selection means for selecting scanning control conditions of the scanning

means in accordance with a plurality of read magnifications preset as read magnifications of the document by the reading means;

5 setting means for setting the scanning control conditions selected by the scanning-control-condition selection means to a plurality of control conditions in accordance with the correction of the color signals to be corrected by the correction means every line; and

10 operation means for computing the image data at a corresponding read magnification through operations in accordance with the color signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

15 15. An image-processing device comprising:

reading means for reading signals in a main scanning direction of an image of a document;

20 scanning means including a carriage for relatively moving the reading means and the image of the document to make the reading means scans the image in its sub-scanning direction;

25 scanning-control-condition selection means for selecting scanning control conditions of the scanning means in accordance with a plurality of read magnifications of the document preset by the reading means as read magnifications;

setting means for setting the scanning control

conditions selected by the scanning-control-condition selection means to a plurality of control conditions in accordance with the read magnification of the reading means;

5           first operation means for computing the image data at a corresponding read magnification through enlargement operation in accordance with the signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications;

10          second operation means for computing the image data at a corresponding read magnification through reduction operation in accordance with the signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications; and

15          change means for adaptively changing the first and second operation means in accordance with a set read magnification.

20          16. An image-processing device according to claim 15, wherein the setting means sets the scanning control conditions to a specific magnification and magnifications upper and lower than the specific magnification in order to prevent vibrations caused by the carriage scanning.

25          17. A method for controlling an image-processing device provided with scanning means including a

carriage which relatively moves first and second  
reading means for reading first and second signals and  
an image of a document in a main scanning direction of  
the image to make the first and second reading means  
5 scan the image in its sub-scanning direction,  
comprising:

selecting scanning control conditions of the  
scanning means in accordance with a plurality of read  
magnifications preset as read magnifications of the  
10 document by the first and second reading means;

setting the scanning control conditions to a  
plurality of control conditions in accordance with the  
read magnification of the first reading means;

15 setting the scanning control conditions to a  
plurality of control conditions in accordance with the  
read magnification of the second reading means; and

computing the image data through operations at a  
corresponding read magnification in accordance with the  
first and second signals read by the first and second  
20 reading means at any one of the preset read  
magnifications when set to a read magnification other  
than the preset read magnifications.

18. A method for controlling an image-processing  
device provided with scanning means including a  
25 carriage which relatively moves first and second  
reading means for reading monochrome and color signals  
and an image of a document in a main scanning direction

of the image to make the first and second reading means scan the image in its sub-scanning direction, comprising:

5 aligning color signals read by the second reading means every line;

selecting scanning control conditions of the scanning means in accordance with a plurality of read magnifications preset as read magnifications of the document by the first and second reading means;

10 setting the scanning control conditions to a plurality of control conditions in accordance with alignment of the color signals every line; and

computing the image data at a corresponding read magnification in accordance with the monochrome and color signals read by the first and second reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

15 19. A method for controlling an image-processing device provided with scanning means including a carriage which relatively moves reading means for reading color signals and an image of a document in a main scanning direction of the image to make the reading means scans the image in its sub-scanning direction, comprising:

20 aligning color signals read by the reading means every line;

selecting scanning control conditions of the scanning means in accordance with a plurality of read magnifications preset as read magnifications of the document by the reading means;

5 setting the scanning control conditions to a plurality of control conditions in accordance with the alignment of the color signals every line; and

10 computing the image data at a corresponding read magnification in accordance with the color signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications.

15 20. A method for controlling an image-processing device provided with scanning means including a carriage which relatively moves reading means for reading signals and an image of a document in the main scanning direction of the image to make the reading means scans the image in its sub-scanning direction, comprising:

20 selecting scanning control conditions of the scanning means in accordance with a plurality of read magnifications preset as read magnifications of the document by the reading means;

25 setting the scanning control conditions to a plurality of control conditions in accordance with the read magnification of the reading means;

computing the image data at a corresponding read

magnification through enlargement operation in accordance with the signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications;

5 computing the image data at a corresponding read magnification through reduction operation in accordance with the signals read by the reading means at any one of the preset read magnifications when set to a read magnification other than the preset read magnifications; and

10 adaptively changing the enlargement operation and the reduction operation in accordance with a set read magnification.